Applicant: Rainer Butendeich et al.

Attorney's Docket No.: 12406-141US1 / P2003,0404

Serial No.: 10/561,318

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Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

- (Currently Amended) A radiation-emitting semiconductor component with a layer structure comprising
 - an n-doped confinement layer,
 - a p-doped confinement layer, and
- an active, photon-emitting layer disposed between said n-doped confinement layer and said p-doped confinement layer, wherein
- said n-doped confinement layer is doped with comprises a first n-dopant for producing high active doping and/or with a sharp doping profile and
- said active layer is doped with comprises a second n-dopant, different from the first dopant, for improving the layer quality of said active layer.
 - 2. (Canceled)
 - 3. (Canceled)
- 4. (Currently Amended) The radiation-emitting semiconductor component as recited claim 1, wherein said n-doped confinement layer is doped both with said first n-dopant and with an additional dopant, particularly with said second n-dopant.
- (Original) The radiation-emitting semiconductor component as recited in claim 1, wherein said semiconductor component is an LED.

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 (Currently Amended) The radiation-emitting semiconductor component as recited in claim 5, wherein said active layer of said LED is formed by comprises a homogeneous layer.

- (Currently Amended) The radiation-emitting semiconductor component as recited in claim 5, wherein said active layer of said LED is formed by comprises a quantum well or a multiple quantum well.
- 8. (Original) The radiation-emitting semiconductor component as recited in claim 1, wherein said semiconductor component is a laser diode in which a first waveguide layer is disposed between said active layer and said n-doped confinement layer and a second waveguide layer is disposed between said active layer and said p-doped confinement layer.
- (Original) The radiation-emitting semiconductor component as recited in claim 8, wherein said first waveguide layer is undoped.
- 10. (Original) The radiation-emitting semiconductor component as recited in claim 8, wherein said first waveguide layer is doped with said second n-dopant.
- (Original) The radiation-emitting semiconductor component as recited in claim 8, wherein said second waveguide layer is undoped.
- 12. (Currently Amended) The radiation-emitting semiconductor component as recited in claim 1, wherein silieon is used as said first n-dopant comprises silicon.
- 13. (Currently Amended) The radiation-emitting semiconductor component as recited in claim 1, wherein telluride is used as said second n-dopant comprises telluride.
- 14. (Currently Amended) The radiation-emitting semiconductor component as recited in claim 1, wherein said p-doped confinement layer is doped with comprises magnesium, carbon or zinc dopant.

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15. (Currently Amended) The radiation-emitting semiconductor component as recited in claim 1, wherein said layer structure is formed on the comprises a basis of AlInGaP, AlGaAs, InGaAlAs or InGaAsP.

16. (Canceled)

- 17. (New) The radiation-emitting semiconductor component as recited claim 4, wherein the additional dopant is said second n-dopant.
- 18. (New) The radiation-emitting semiconductor component as recited by claim 1, wherein said n-doped confinement layer comprises said first n-dopant with the highest possible active doping.